

# ppp

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **29**
- SRM **5.1**
- Style **Belgian Golden Strong Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

## Steps

- Temp **55 C**, Time **20 min**
- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

## Mash step by step

- Heat up **24 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	7.5 kg (93.8%)	80 %	4
Grain	Pszeniczny	0.5 kg (6.3%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	33 g	60 min	10 %
Boil	Saaz (Czech Republic)	10 g	10 min	4.5 %
Boil	Saaz (Czech Republic)	10 g	5 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
mangrove jask's m41 lub m42	Ale	Dry	11.5 g	preferuje m42 mniej fenoli

## Extras

Type	Name	Amount	Use for	Time
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Spice	swieża skórka pomaranczy	130 g	Secondary	14 day(s)
Spice	swieża skórka cytryny	30 g	Secondary	14 day(s)
Spice	kolendra zmielone ziarno	10 g	Secondary	14 day(s)